| | | at. Ta im emaini shire es | | | . au lui — Lina a via a innerre il. | | | | | | | |
|-------------------------------------|---------------------------------------|-------------------------------|----------------------------------|-------------------|-------------------------------------|----------------|-------------|--------------|---------------------------------------|------------------|------------------|----------------|
| Work Orde May-30-13 7:-12 | | | | | *102 | 429* | | | | | ٠. | Pag |
| Item ID: Revision ID: | D3916-0411 | | | | Accept | *N900 | 040 | 100 |)* ፡ | Setup Star | * *N | S1* |
| Item Name: | Rib Assembly | | | | | • | | | | Stoj | *N | S2* |
| Start Date: Required Date: | 5/27/13 5/27/13 | Start Qty: 1.0 Req'd Qty: 1.0 | | *1*4 | • | Cust Item I | D: | | | • | ~ | |
| Reference: | | - | | ή | | | 3 | | | | | |
| Approvals: | Process Plan | 1: MLJ | Date: | 13-05-30 | Tooling: | D: | ate: | - • | | Run Star Stop | "IN | R1* |
| 9 3 | QC: | | Date: | | SPC (Y/N): | Da | ate: | | | . 510 | ´ *N | R2* |
| Sequence ID/ Work Center II | | Operation Description | A CONTRACTOR | *. | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
| Draw Nbr | Revi | sion Nbr. | | | | (4 | · | | · · · · · · · · · · · · · · · · · · · | | | * |
| D3916 | A | | | | | | | | | | | */ |
| 100 * | · · · · · · · · · · · · · · · · · · · | • | | | 0.00 | | | | 6 | | | |
| *100* | | | | | | | | | (4) | 2/10 | 13-1 | 07- |
| Large Fab | | Memo | | | 0.00 | | | | | | | / |
| Large Fab | | | tube 50" d tube with man | uel pipe bender | as per DT9567 | | | | | | | |
| ; | - | *** M | ake line at 9.00" | and use jig for o | other lines, and ensure se | am in place on | | | | | | |
| | , | | tube when bend access tube ma | | ize as per dwg D3916 | | | | | | ; | |
| : | .a. | | | | 03916-1 using DT9605 | | | | | | | |

QC6- Inspect dimensions to drawing

0.00

106 *106* QQ

Memo

0.00

(1) 13-01-22 (DA)

Quality Control

| DQA: | | | Date: | | | | | | | | | | | 10 | |
|--------------------|----------------|----------|------------|-------|----------|------------------------------|----------|------------|-------------------|-------------|-----------|--------------------|-----------------|--------|--------------------|
| QA Closed: | | | Date: | | | WORK ORDER NON- | -CC | ONFO | RMANCE / UI | | Mor | k Order up | data only | _ | AEROSPACE |
| QA CIOSCU. | | | Date. | | | | | | | | VVOI | K Order up | date only | | |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST I | DEPA | ARTMENT/ | PROCESS PROCESS | | |
| | | | | | _ | Rework | | | Skid-tube | Crosstube | | | Water Jet | \neg | Engineering |
| Part N | lo. | | | | | Scrap | | | Machining | Small Fab | \exists | Proc | d. Eng. Coor. | \neg | Quality |
| | | | - | | | Use-as-is | | Thern | noforming | Finishing | ٦ | Rec/Stor | e/Packaging | | Other |
| NCR N | 10 | | | | | Suspected Unapproved | | | Large Fab | Composite [| | | Supplier | | |
| | - 1 | | | | | | | | | | | c: 0 | - | | |
| Root | | | Cham | O4 | Desci | ription of work order update | | Initial | Act | | | Sign & | \ | | 001 |
| Cause | L | Date | Step | Qty | | or non-conformance | Cn | nief Eng | Descr | iption | + | Date | Verification | + | QC Inspector |
| Design Doc/Data | \dashv | | | | | | | | | | | | | | |
| Equip/Tooling | \dashv | | | | | | | | | | | | | | |
| Handling/Pre | \dashv | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | | | |
| Operator | | | | | | | | | - | | | | | - [| |
| Offset/Setup | | | | | | | | | | | | | | | |
| Process | | | | | | | | | | | | | | | |
| Supplier | | | | : | | | | | | | | | | | |
| Training | | | | | | | | | | | ŀ | | | | |
| Transport | | | | | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | | | | |
| | | | | | _ | | FAI | ULT CAT | EGORY | | | | | | |
| Landi | ng Gea | <i>:</i> | | | | General | | _ | - | | | | _ | | |
| | Ber | nding | | | | Bend | | Folio/P | rogram | | c | outside Dime | ensions | P | ressure/Forced |
| | Cer | ntre No | t Concer | ntric | | BOM/Route | L | Grain | | | 0 | ver/Under | tolerance | s | et-up |
| | Cra Cra | icks | | | <u> </u> | Broken/Damage/Defect | <u> </u> | Hardwa | re | | P | art Incorrec | t [| | emperature/Cure |
| | Cri | mp/Kin | k/Ripple | /Wave | | Burrs | _ | Inspecti | on Incomplete/Ur | nqualified | P | art Lost/Mis | | _ | Veld |
| | Cut | | | | ļ | Contamination | _ | 4 | ions Incomplete/U | Jnclear | P | art Moved | | \^ | Vrong Stock Pulled |
| | _ | ıshing | | | <u> </u> | Countersink | | - i | ned/off center | | - | ositioned W | Ĭ F | | |
| | \vdash | at Trea | | | | Cut Too Short | | Mislabe | | į | P | ower Loss/S | Surge | С | ther |
| | — | | Strip in | Tube | <u> </u> | Drawing | <u> </u> | Misread | | | _ | | · · · · · · | | |
| | | rks/Ch | | | <u> </u> | Drill Holes | L | Off-set | | | _ | | | | |
| i | _ | _ | equence | | | Finish | | 4 | Calibration | | _ | | | | |
| | Wa | ive/Tw | ist in Tuk | oe | l | Fit/Function | l | Out of S | Sequence | | | | | | |

Quality Control

102429 Page 2 May-30-13 7:12:32 AM Item ID: D3916-041 Accept *N900040100* Setup Start **Revision ID:** Rib Assembly Item Name: Start Date: Start Qty: 1.00 5/27/13 **Cust Item ID:** Required Date: 5/27/13 Req'd Qty: 1.00 **Customer:** Reference: Run Approvals: Process Plan: _____ Date: Tooling: Date: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool # Plan Reject Tool ID Accept Reject Insp. Work Center ID Description **Run Hours** Number Stamp Code Qty Qty Weld per dwg A/R S.S. rod Batch / 22357 0.00 me 13-07-22 *107* 0.00 Large Fab Memo 1- weld bushing as per dwg D3916 Large Fab 2- grind welds flush QC5- Inspect part completeness to step on W/O 0.00 *110* 13-07-23 QC 0.00 Memo Quality Control QC10- Inspect visual per QSI004- ground welds 0.00

0.00

Memo

@ 1301.33

| DQA: | | | Date: | | | | | | | | | | AA PT |
|-----------------|--------------|--------------|-----------|-------|-------|------------------------------|-----|----------|--------------------|-----------|--------------|---------------|--------------------|
| O A . Cl = == d | | a'. | D-4 | | | WORK ORDER NON | -CC | ONFO | RMANCE / UP | | | | AEROSPACE |
| QA Closed: | ÿ. | | Date: | | • | | | | | | ork Order up | date only | |
| Work Orde | er: | | | | | DISPOSITION | | | | AGAINST D | EPARTMENT, | /PROCESS | |
| | | | · | | _ | Rework | 1 | | Skid-tube | Crosstube | | Water Jet | Engineering |
| Part N | lo. | | | | | Scrap | | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | | Use-as-is | | i | noforming | Finishing | ⊣ | re/Packaging | Other |
| NCR N | 10 | | - | | | Suspected Unapproved |] | - | Large Fab | Composite | | Supplier | |
| Root | - | Т | | | Desci | ription of work order update | | nitial | Acti | on | Sign & | | |
| Cause | D | ate | Step | Qty | | or non-conformance | 1 | ief Eng | l | | Date | Verification | QC Inspector |
| Design | | | | | | , , , , , | | | | , | | | |
| Doc/Data | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | 1 | | | | | | |
| Handling/Pre | | | | | | | | | | | | : | |
| Material | | 1 | | | | | | • | | | | | , |
| Operator | | 1 | | | | | | | | | | | |
| Offset/Setup | | | | | | | | | | | | | |
| Process | | | | | | | | | | | | | |
| Supplier | | | | | | | | | | | | | |
| Training | | | | ŀ | | | l | | | | | | |
| Transport | | | ٠ | | | | Ì | | | | | | |
| Unapproved | | | | | | | | | | | | | · |
| | | | - v-a | | | | FAL | JLT CA | ΓEGORY | | | | |
| Landir | ng Gear | | | | | General | | | | | | | |
| | Ben | ding | | | | Bend | | Folio/F | Program | | Outside Dim | ensions | Pressure/Forced |
| * *** | Cen | tre No | t Concer | ntric | | BOM/Route | | Grain | | | Over/Under | tolerance | Set-up |
| | Crac | cks | | | | Broken/Damage/Defect | | Hardwa | ire | | Part Incorre | ct | Temperature/Cure |
| | Crin | np/Kinl | k/Ripple | /Wave | | Burrs | | Inspect | ion Incomplete/Un | qualified | Part Lost/Mi | ssing | Weld |
| | Cuff | fs | | | | Contamination | | Instruct | tions Incomplete/U | nclear | Part Moved | | Wrong Stock Pulled |
| | Crus | shing | | | | Countersink | | Misalig | ned/off center | | Positioned V | | _ |
| | Hea | t Treat | | | | Cut Too Short | | Mislabe | eled | | Power Loss/ | Surge | Other |
| | Insp | ection | Strip in | Tube | | Drawing | | Misrea | b | | | | |
| | Mar | rks/Cha | atter | | | Drill Holes | | Off-set | | | | | |
| | _ | | quence | | | Finish | | Out of | Calibration | | | | |
| | Wav | ve/Twi | st in Tub | oe . | | Fit/Function | | Out of | Sequence | | | | |

102429

Page 3

Quality Control

| May-30-13 7:1 | 12:32 AM | | | | | | | | ··· | · • · · · · · · · · · · · · · · · · · · | | \. |
|-----------------------------|--------------|--------------------------|----------------------|----------------------|-------------|------------|--------------|--------------|-------------|---|-------|----------------|
| Item ID: Revision ID: | D3916-041 | 1 | | Accept | *N900 | 040 | 100 |)* | Setup | Start | *N. | 31 * |
| Item Name: | Rib Assembly | , | | | | | | | | Stop | *N.S | 32* |
| Start Date: | 5/27/13 | Start Qty: 1.00 | *1* | | Cust Item I | D: | | | | | | |
| Required Date | e: 5/27/13 | Req'd Qty: 1.00 | *1* | | Customer: | | | | | | | |
| Reference: | | | | | | | _ | | ъ | S4 = ==4 | | |
| Approvals: | Process Pla | ın: | Date: | Tooling: | Da | ıte: | | | Run | Start | *NF | 21 * |
| | QC: | | Date: | SPC (Y/N): | Da | ıte: | | | | Stop | *NF | ? 2* |
| Sequence ID/ Work Center | ID | Operation Description | | Set Up/ Run Hours | Tool ID | Tool# | Plan Code | Accep Qty | pt Re Qt | | - | Insp. Stamp |
| *130 *130* | | Identify as per dwg & So | ock Location: | 0.00 | | | | | 12 | /12 | ·07·2 | ש גלע |
| Packaging Packaging | | Memo | | 0.00 | | | • | | | | 0_7_& | <u> </u> |
| | | | | | | | | | | 1 | 1. | 10 |
| 140 *140* | | QC21- Final Inspection | - Work Order Release | 0.00 | | | | ٠. | | 19/ | 7/24 | 94 |
| QC QC | | Memo | | 0.00 | | | | | | · · · | | |

| DQA: | | Date: | | | | | | | | | | DART |
|---------------|----------------|---------------|----------|-------|------------------------------|-----|----------|----------------------------|-------|---------------|---------------|--------------------|
| QA Closed: | | Date: | | | WORK ORDER NON | -CC | ONFO | RMANCE / UPDATE | \ A (| O | | AEROSPACE |
| QA Closed. | ,, | Date. | | | | _ | | | VV | ork Order up | date only | <u> </u> |
| Work Orde | er: | | | | DISPOSITION | | | AGAINS | ST DE | PARTMENT | /PROCESS | |
| | | | ٠ | | Rework | 7 | | Skid-tube Crosstuk | oe 🗀 |] | Water Jet | Engineering |
| Part N | lo. | | | | Scrap | 1 | | Machining Small Fa | | Pro | d. Eng. Coor. | Quality |
| | | | | | Use-as-is | 1 | | noforming Finishir | | 1 | e/Packaging | Other |
| NCR N | No | | | | Suspected Unapproved |] | | Large Fab . Composi | | | Supplier | |
| Root | | | | Desci | ription of work order update | П | nitial | Action | | Sign & | | |
| Cause | Date | Step | Qty | | or non-conformance | 1 | ief Eng | 1 | | Date | Verification | QC Inspector |
| Design | | | | | | | | | | | | |
| Doc/Data | | | | | · | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | |
| Handling/Pre | | | | | | | | | | | | |
| Material | | | | | | | | · | | | | |
| Operator | | | | | | | | | | | | |
| Offset/Setup | | | | ٠ | | | | | | | | |
| Process | | | | | | | | | | | | |
| Supplier | | | | | | | | | | · | | |
| Training | | | | | | | | · | | | | |
| Transport | | | | | | | | | | | | |
| Unapproved | · | | | | | | • | | | | | · |
| | | | | | | FAI | ULT CA | TEGORY | | | | |
| Landi | ng Gear | | | | General | | _ | | | | | |
| | Bendin | g | | | Bend | | Folio/F | Program | | Outside Dim | ensions | Pressure/Forced |
| | Centre | Not Conce | ntric | | BOM/Route | | Grain | | | Over/Under | tolerance | Set-up |
| | Cracks | | | | Broken/Damage/Defect | | Hardwa | are | | Part Incorred | t | Temperature/Cure |
| | Crimp/ | Kink/Ripple | e/Wave | | Burrs | | Inspect | ion Incomplete/Unqualified | | Part Lost/Mi | ssing | Weld |
| | Cuffs | | | | Contamination | | Instruct | tions Incomplete/Unclear | · [| Part Moved | | Wrong Stock Pulled |
| | Crushii | ng | | | Countersink | | Misalig | gned/off center | | Positioned V | | _ |
| | Heat T | | | - | Cut Too Short | | Mislabe | eled | | Power Loss/ | Surge | Other |
| | Inspec | tion Strip in | 1 Tube | | Drawing | | Misread | d · | | | | |
| | Marks | 'Chatter | | | Drill Holes | | Off-set | | | | | |
| | Turnin | g Sequence |) | | Finish | | Out of (| Calibration | | | | , |
| | Wave/ | Twist in Tul | be | | Fit/Function | | Out of | Sequence | | | | |

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

May-28-13 10:03:15 AM

Work Order ID:

102429

Parent Item:

D3916-041

Parent Item Name:

Rib Assembly

Start Date: 5/27/13

Required Date: 5/27/13

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP RevA: New issue DD verified by:EC

IPP Rev:B as per dwg revA 10.03.15

| | verified by:EC | | | | | | · | | | | | | |
|--|------------------------|---------------|-------------|---------------------|------------------|---------------------|--|----------------|--------------|---------------|---------------|----------------|---------------|
| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
| D3759-1 Bushing | | Manufactured | No | | | 100 | Each | 224.0000 | | 7/4 | ne | /3 | -07-2 |
| • | | | | Location | | Loc Qty | <u>Lo</u> | oc Code | | | | 1 | |
| | | | | WA | | 40 | | | | | | | , 20 |
| B10080 | 8 × 2 | 1 | | 100 | 323 | 40 | | | | | | | 1 1 1 |
| , , , , , , , , , , , , , , , , , , , | | • | | WA004 | • | 184 | | | | <u> </u> | | X. | : . |
| | | | | . 101: | | 40 | | | - | | | | • |
| | | | | 664 792 | | 1 1 | | | | | | 2 | * . * |
| | | | | 834 | | 7 | | | | | | | |
| | | | | 865 | | 20 | | | | | | | |
| | • | | | 882 | | 3 | | | | | | | |
| | | | | 897 | | 3 | الربور | | | | | | |
| | | | | 907 987 | | 99- | salitation. | | | 2 | | | |
| M304TS0.750W:049 304 SQ Tube .75x.75x.049 | »W | Purchased | No | 701 | | 100 | s de la companya de l | 1,032.7474 | | | | me | <i>/3-</i> 07 |
| | | | | Location | | Loc Qty | . La | oc Code | | | | | r |
| • | | | | MAT017 | | 59.1068084 | | | | | | | |
| | • | | | 124 | 492 | 59.1068084 | | | | | | | |
| | | +2 | | WA006 | | 973.6405555 | | | | | | | |
| · • | | | | 123 | | 28.9999555 | | | | · . | | | ** |
| | | | | 125 | 124 575 | 493.8736 450.767 | | | 8. | 34373 | 5 | | |
| | | | m/ | 4603 | 39 | | | | 2 . | 34375 3437 |) \$ | | •• ! |

| | | | | | | | | | DQA: | Date: | | | | | | |
|---------------|--------|------|-----|--------|--------------------------------|-----------|----------------------------|-------------------------------|------------|--------------------------|---------------------------|--|--|--|--|--|
| NCR: Ye | s / No | | | | WORK ORDER NON-C | ONFORI | MANCE / UP | | QA Closed: | Date: | | | | | | |
| Work Order: | | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | | | | | |
| Part No | | | | | Rework Scrap | | Skid-tube Machining | Crosstube Small Fab Finishing | | Water Jet od. Eng. Coor. | Engineering Quality Other | | | | | |
| NCR No |) | | | | Use-as-is Work Order Update | inerr | Large Fab | Composite | Rec/Sto | Supplier | Other | | | | | |
| Root | | | | Descri | ption of work order update | Initial | Ac | tion | Sign & | | | | | | | |
| Cause | Date | Step | Qty | | or Non-conformance | Chief Eng | Desc | ription | Date | Verification | QC Inspector | | | | | |
| Doc/Data | | | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | | | | | |
| Operator | | | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | | | | |
| Setup | | | | | | | | | |] | | | | | | |
| Other | | | | | | | | | | | | | | | | |
| Process | | | | | | | | | | | ! | | | | | |
| Supplier | | | | | | | | | | | | | | | | |

Landing Gear General Bending Bend Grain Ovalized Pressure/Forced BOM/Route Centre Not Concentric to O/S Over/Under tolerance Temperature/Cure Hardware Broken/Damaged Part Incorrect Weld Inspection Incomplete Cracks Crushed/Crimped Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Cuffs Contamination Maintenance Part Moved Countersink Positioned Wrong Heat Treat Mislabeled Other Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Drill Holes Offset Ripples in Bend Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Out of Sequence Finish

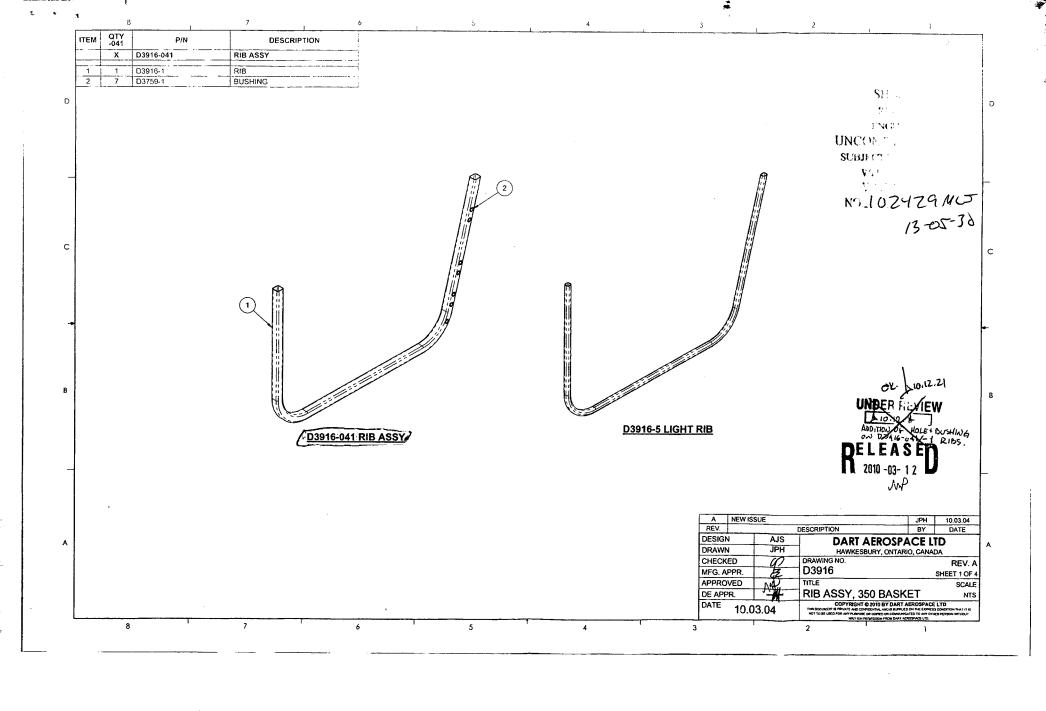
Outside Dimensions

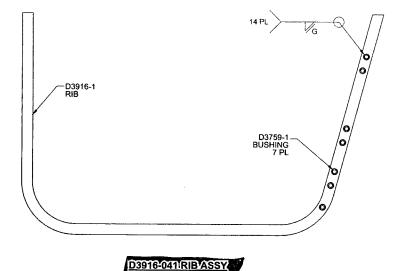
FAULT CATEGORY

Wave/Twist in Tube

Folio

Training Unapproved





RELEASED

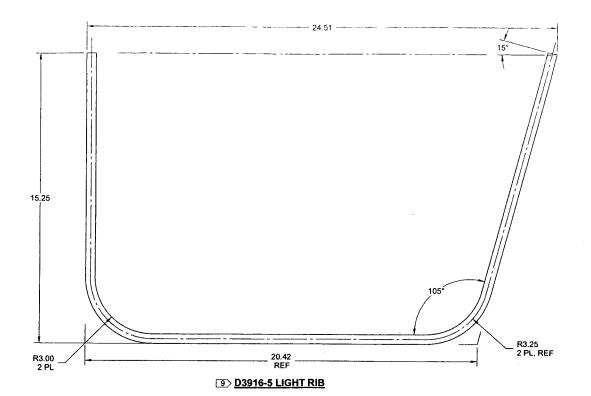
NOTES:
1) MATERIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: NONE
7) WEIGHT -041: 1.84 lbs
8) WELD PER DART QSI 004

DESIGN AJS DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWN JPH CHECKED DRAWING NO. REV. A D3916 MFG. APPR. SHEET 2 OF 4 APPROVED TITLE SCALE DE APPR. **RIB ASSY, 350 BASKET** NTS DATE COPYRIGHT © 2010 BY DART AEROSPACE LTD 10.03.04

3

15° 2.96 REF 3.16 8.00 1.000 REF ϕ 0.38 THRU, TYP 11.00 REF 13.50 REF 15.50 8.327 BREAK EDGE 0.030 X 45° APPROX CHAM TYP 1.000 10.95 0.049 REF 0.75 REF 1.000 **SECTION A-A** R3.38 R3.00 2 PL, REF 20.85 2 PL REF 9 D3916-1 RIB NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.049 WALL REF DART SPEC. M304TS0.750W.049
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WFIGHT: 1.76 lbs
9) TUBE FLAT LENGTH 50.0 REF DESIGN DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA AJS DRAWN JPH DRAWING NO. CHECKED REV. A

D3916 MFG. APPR. SHEET 3 OF 4 APPROVED TITLE SCALE RIB ASSY, 350 BASKET DE APPR. DATE 10.03:04



RELEASED 2010 -03- 12

NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.50 X 0.50 X 0.049 WALL REF DART SPEC. M304TS0.500W.049
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.07 lbs
9) TUBE FLAT LENGTH 49.5 REF

| DESIGN | AJS | DART AEROSPACE I | TD |
|------------|------|--|-------------------------|
| DRAWN | JPH | HAWKESBURY, ONTARIO, CANA | |
| CHECKED | 0 | DRAWING NO. | REV. A |
| MFG. APPR. | 星 | D3916 | SHEET 4 OF 4 |
| APPROVED | M | TITLE | SCALE |
| DE APPR. | -4 | RIB ASSY, 350 BASKET | NTS |
| DATE 10.0 | 3.04 | COPYRIGHT @ 2010 BY DART AEROSPAC THIS DOCUMENT IS PROVIDE AND COMPRESSION AND IS BUPFLED ON THE EXPRES NOT TO SELECT FOR MY PURPOSE OR COPY ILD OR COMMUNICATED TO ANY OF | BS COMEXTION THAT IT IS |